

## Dominion Bremo and Possum Point Ash Pond Closures Capabilities

### **Trans Ash, Inc.**

#### **1. General Background:**

Trans Ash, Inc. was founded in 1960 as a division of a heavy construction company. 55 years of construction and CCR management experience have made us one of the power generation industry's leading heavy construction contractors. With over \$45 million dollars in revenues annually, Trans Ash is a financially stable company with over 250 employees and more than 700 pieces of equipment in its fleet.

Trans Ash utility based services include:

- Civil construction services
- CCR landfill construction
- CCR landfill closure
- CCR pond construction
- CCR pond management
- CCR pond closure
- CCR landfill management
- CCR facility management
- Hydraulic dredging
- Environmental consulting

#### **2. Experience in similar projects: Ash pond excavation and site closure/liner installation**

Trans Ash has extensive experience in CCR pond excavation. We certainly understand the complexities of working on ash ponds and the challenges that they present. Following is a list of ash pond excavation and management projects completed by Trans Ash:

- DP&L Hutchings - CCP excavation/offsite fill
  - Project scope:
    - Excavate fly ash
    - 1,100,000 tons
    - Load and haul to off-site structural fill
    - Place and compact material at fill site
    - Provide erosion control measure and dust suppression

- Duke Energy Beckjord Station – CCP excavation/off site structural fill
  - Project scope:
    - Excavate fly ash
    - 2,400,000 tons
    - Load and haul to off-site structural fill
    - Place and compact material at fill site
    - Provide erosion control measure and dust suppression
    - Install drainage flumes and collector ditches
    - Place cover soil and seed
  
- AES Petersburg - CCP excavation
  - Project scope:
    - Excavate fly ash
    - 1,200,000 tons
    - Load material for off-site mine reclamation
    - Manage site water flow/drainage
  
- TVA Allen – CCP excavation/placement
  - Project scope:
    - Excavate fly ash
    - 500,000 tons to date
    - Load and haul fly ash to offsite structural fill
    - Place and compact material at fill site
    - Provide erosion control measures and dust suppression
    - Install drainage flumes and collector ditches
    - Place cover soil and seed
  
- Hoosier Energy Ratts Station - CCP excavation/onsite fill
  - Project scope:
    - Excavate fly ash
    - 450,000 tons
    - Load and haul to on-site placement area
    - Place and compact material
    - Manage site water flow/drainage

- TVA Johnsonville – CCP excavation, landfill development, operation and closure
  - Project scope:
    - Excavate fly ash
    - 5,000,000 tons
    - Load and haul fly ash to landfill
    - Permit 70 acre offsite landfill
    - Develop landfill site
      - Liner placement
      - Leachate collection system
      - Wetland construction/mitigation
    - Operation of landfill
      - Place bottom ash drainage layer
      - CCP material placement
      - Leachate collection
      - Grounds/site maintenance
    - Landfill closure
      - Compliance grading
      - Liner placement
- TVA Paradise – CCP excavation, material placement
  - Project scope:
    - Excavate fly ash
    - 1,000,000 tons annually
    - Load and haul to onsite placement area
    - Place and compact material
    - Manage site water flow/drainage
    - Perform routine site maintenance
- Duke Energy Miami Fort - CCP excavation/offsite structural fill
  - Project scope:
    - Excavate fly ash
    - 2,000,000 tons
    - Load and haul to offsite structural fill
    - Place and compact material at fill site
    - Provide erosion control measure and dust suppression
    - Install drainage flumes and collector ditches
    - Place cover soil and seed
    - Place paving base
- Vectren Culley Station - CCP excavation
  - Project scope:
    - Excavate fly ash
    - 1,600,000 tons
    - Load material for offsite mine reclamation
    - Manage site water flow/drainage

- Duke Energy Sutton Steam Plant - CCP excavation/on-site fill
  - Project scope:
    - Excavate fly ash
    - 270,000 tons
    - Load and haul to on-site placement area
    - Place and compact material
    - Manage site water flow/drainage
  
- Duke Energy Cape Fear Steam Plant – CCP excavation/dike construction
  - Project scope:
    - Excavate fly ash
    - 80,000 tons
    - Load and haul to onsite placement area
    - Construct interior pond dikes with compacted material
    - Manage site water flow/drainage
    - Site maintenance
  
- Duke Energy Asheville Steam Plant -CCP excavation/dike construction
  - Project scope:
    - Excavate fly ash
    - 120,000 tons
    - Load and haul to on-site placement area
    - Construct interior pond dikes with compacted material
    - Manage site water flow/drainage
    - Site maintenance
  
- Ameren Sioux Station – CCP excavation/rail spur construction
  - Project scope:
    - Excavate fly ash
    - 280,000 tons
    - Load and haul to offsite rail spur construction
    - Place and compact material at fill site
    - Stabilize fly ash
    - Provide erosion control measure and dust suppression
  
- Alabama Power Barry – CCP excavation/cell construction
  - Project scope:
    - Excavate active fly ash ponds
    - 250,000 tons
    - Load and haul to construct interior pond dikes/collection cells
    - Site maintenance

Following is a list of CCR landfill development, site preparation, closure and liner projects:

- Work plan 11, Work Plan 15, Cumberland City, TN
  - TVA, Cumberland Fossil Plant
  - Contact: Dana Williams  
423-763-8773
  - Project scope:
    - Compliance grading of CCR landfill
    - Screening of dirt cover material
    - Placement of dirt cover material
    - Pipe installation
    - Bench and ditch grading
    - Seeding
  - 74 acres
- Bivens Phase 1 Landfill Closure, Camden, TN
  - TVA, Johnsonville Fossil Plant
  - Contact: Missy Hedgecoth  
423-240-3132
  - Project scope:
    - Compliance grading of CCR landfill
    - Placement of 18" base soil layer
    - Placement of 6" topsoil layer
    - Installation of drainage control structures
    - Seeding
  - 46 acres
- Bivens Phase 2 Landfill Development, Camden, TN
  - TVA, Johnsonville Fossil Plant
  - Contact: Missy Hedgecoth  
423-240-3132
  - Project scope:
    - Environmental permitting
    - Compliance grading
    - Cell development including excavation of 400,000 cubic yards of on-site material
    - Installation of 44 acres of GCL liner as two layers separated by clay barrier
    - Installation of 22 acres of 60 mil HDPE FML
    - Installation of leachate collection system
    - Placement of bottom ash drainage layer
    - Installation of drainage structures
    - Wetland construction/mitigation
    - Installation of erosion control measures
    - CCR material placement
    - Leachate hauling
    - Continued site maintenance
  - 22 acres

- Pigeon Industrial Park Fill Site, Memphis, TN
  - TVA, Allen Fossil Plant
  - Contact: Missy Hedgecoth  
423-240-3132
  - Project scope:
    - Fill site, new cell development
    - Subgrade preparation
    - Installation of lined channels
    - Installation of erosion control measures
    - Development of detention basin
    - CCR material placement
    - Continued site maintenance
  - 60 acres
  
- Bivens Phase 2 Landfill Closure, Camden, TN
  - TVA, Johnsonville Fossil Plant
  - Contact: Missy Hedgecoth  
423-240-3132
  - Project scope:
    - Compliance grading of sub surface
    - Installation of HDPE surface drainage structures
    - Installation of 64 acres of GCL liner
    - Installation of 64 acres of 40 mil HDPE FML
    - Installation of 64 acres of Geo Composite drainage membrane
    - Placed 30" of soil cover
    - Placed 6" vegetative cover
    - Installed 1,000' of grouted, rip-rap lined storm water collection ditch
    - Hydro-seeded 64 acres plus all disturbed work areas
  - 64 acres
  
- Pigeon Industrial Park Fill Site, Memphis, TN
  - TVA, Allen Fossil Plant
  - Contact: Missy Hedgecoth  
423-240-3132
  - Project scope:
    - Fill site, new cell development
    - Subgrade preparation
    - Installation of lined channels
    - Installation of erosion control measures
    - Development of detention basin
    - CCR material placement
    - Continued site maintenance
  - 60 acres

- Alcoa Structural Fill Site
  - Alcoa Aluminum, Warrick Plant
  - Contact: Rachel Wright  
812-480-6879
  - Project scope:
    - Site preparation
    - Compliance grading
    - High wall barrier installation
    - Placement of 48" dirt, cover material
    - CCR placement
    - Continued site maintenance
  - 50 acres
  
- TVA Cumberland Fossil Plant
  - Contact: Dana Williams  
423-763-8773
  - Project scope:
    - Constructed two, 40 Mil Flexible Membrane Lined channels to dewater gypsum slurry from plant production
    - Poured two concrete outfall structures
    - Fused and installed 42" HDPE discharge piping
    - Installed precast manholes for 42" discharge piping
    - Fused and installed 16" HDPE slurry piping
    - Installed HDPE header and valve system for slurry supply
    - Placed and graded 72,589 CY of gypsum fill for cell construction
    - Placed rip rap lining and channel protection for slurry channels
    - Installed a 10" perforated under-drain system
    - Installed concrete barriers for safety
    - Perform regular channel maintenance
    - Compliance grading; Work performed by Trans Ash
    - Liner installation; subcontracted
    - 22,000 square feet
  
- Alabama Power Plant Barry
  - Contact: Larry Browning  
205-438-3357
  - Project scope:
    - Constructed three, 40 Mil Flexible Membrane Lined channels for treating gypsum pond run-off water
    - Placed 40,000 cubic yards of fly ash and bottom ash
    - Fused and installed discharge piping
    - Installed gravity fed drainage system between ponds
    - Installed final pond discharge structure
    - Placed wood chips for water treatment
    - Perform regular channel maintenance
    - Compliance grading; Work performed by Trans Ash
    - Liner installation; subcontracted
    - 2 acres

- Duke Energy, Roxboro, NC
  - Contact: Stan Morton  
336-597-6245
  - Scope:
    - Compliance grading; Work performed by Trans Ash
    - Liner installation 60 mil HDPE, FML; subcontracted
    - 16 acres

### **3. Project approach**

#### **Overview**

The primary goal of this project is to complete the closure of three (3) ash ponds at Bremono Power Station and five (5) ash ponds at Possum Point Power Station by fall 2017. Trans Ash's goal is to complete the desired scope on schedule while maintaining zero environmental and safety related incidents. The major components of this scope include: dewatering, preparing the ash pond surfaces, grading the ash pond to the desired closure elevations, installing storm drainage pipe and structures, place cover soil and establish vegetation.

Trans Ash has developed a project approach strategy that includes the expertise to perform major civil tasks including earthmoving, pipe and manhole installation and all other miscellaneous activities. This plan also includes the management and oversight of key specialized subcontractors to perform cast in place concrete, liner systems, pavement and other specialty installations.

#### **Erosion Controls**

The first task associated with this scope will be to install all necessary erosion control measures required. All applicable Best Management Practices will be followed through the duration of this project including silt fence, rock check dams, sediment ponds, temporary seeding and permanent vegetation.

#### **Clearing & Demolition**

Areas of each pond containing vegetation or unwanted structures will be stripped as needed and when each respective area has been sufficiently dewatered to provide safe access.

#### **Dewatering**

After the jobsite has been stabilized and cleared, the next step towards preparing the pond for closure is to initiate the dewatering process. This consists of excavating dewatering ditches and installing pumps to remove the free water from the ash surface. The water will be pumped to a structure or nearby pond through a piping system. Care must be taken to provide a place for the water to settle out before traveling through the permitted discharge structure.

#### **Surface Preparation**

One of the greatest risks associated with any ash pond project is placing heavy equipment on the surface. Trans Ash has extensive experience in preparing ash pond surfaces for excavation and grading activities. The goal of this activity is to stabilize the surface of the ash pond by further dewatering and



consolidating it so that it can safely hold the weight of heavy equipment that is necessary to place it at the designed closure elevations.

### **Sub Surface Grading**

After the ash pond has been stabilized, Trans Ash will utilize GPS equipment to perform fine grading of the ash prior to the placement of the soil cover. This activity involves the use of dozers where minimal grading is needed. Excavators and haul trucks will be used where cut and fill depths are more significant. Surveying coordination and approval are an integral part of this process to ensure that results are received and problematic areas are addressed in a timely manner.

### **Pipes and Manholes**

All of the identified drainage structures and manholes will be installed before, during or after grading activities. The installation of these features will require strict coordination with the grading aspect of the associated work areas. Trans Ash will identify areas that receive cut as part of the final grading plan and will perform this earthwork prior to performing the trenching to ensure that double handling of material does not take place. Once the material has been cut for a trenching operation, material will be closely monitored for fill location to ensure that the material is not placed in a future cut zone.

### **Soil Excavation**

Trans Ash will excavate soil from the onsite borrow and place as cover on the finished subgrade. This material will be graded to permitted closure elevations using GPS dozers.

### **Vegetative Cover**

As soon as a phase of the soil cover is complete, Trans Ash will establish vegetation with a specified seed mix. Erosion control features will remain in place until the permanent vegetation has been established and accepted by the appropriate regulatory agency.

### **Schedule Discussion**

The methodology of our technical discussions includes a detailed explanation of the Work Breakdown Structure (WBS) considerations that are utilized to develop the detailed construction schedule. The development of the Critical Path activities for the referenced construction schedule reflects the construction phasing sequences and considerations that were identified in the construction drawings. The WBS for the Bremo and Possum Point projects will identify the major working components of the Ash Pond Closures.

Trans Ash anticipates winter shutdowns for this project due to inclement weather. During this period, Trans Ash will keep a skeleton crew onsite (including the superintendent) to perform site inspections and to ensure BMPs are properly maintained through this period.

## **Deliverables**

1. Provide all deliverables as outlined in the Contract, Scope of Work, Drawings, Contingency plan, and QA/QC plan.
2. Conduct a detailed project planning kick off meeting with DOMINION involving Trans Ash Engineering, Management and Operations personnel.
3. Maintain the Bremo and Possum Point project schedules using necessary means to meet identified milestones as agreed with DOMINION in project planning discussions.
4. Maintain an open channel of communication with Bremo and Possum Point plant and DOMINION corporate personnel at all times. Trans Ash personnel, including executive management, stand at the ready to meet the needs of DOMINION and the Bremo and Possum Point Fossil Plant.
5. Trans Ash, in conjunction with DOMINION project personnel, will perform routine risk management evaluations related to project safety, schedule and budget. As an outcome of this process, Trans Ash will provide opportunities for enhancement of schedule and budget to DOMINION, based on results of the risk analysis.
6. Ensure a clean (housekeeping) project is maintained at all times, including access roads to and from work areas, Trans Ash facilities and equipment storage areas. We will perform routine inspections to make certain housekeeping is in order.
7. Demonstrate a continued valued commitment to safety and the environment by:
  - a. Performing a weekly Site Safety and Environmental Inspection/Observation. Findings will be reported monthly, including any deficiencies which were identified and corrective actions taken.
  - b. Trans Ash corporate ES&H personnel will conduct a Quarterly Safety and Environmental Audit of the project and work site. This audit will include housekeeping practices as well as compliance to DOMINION rules and procedures.

## **4. Potential challenges**

Potential challenges include:

- An aggressive construction schedule
- Ability to adequately dewater the ponds within required time limits
- Acquiring the necessary quantity of cover soil, either on-site or nearby without creating disruption to neighbors and damage to public roadways
- Environmental restrictions caused by local wildlife

## **5. Project management approach/structure**

### **Management of project**

Project management employs a multi-faceted approach:

A Trans Ash Operations Manager will be utilized to manage this project and act as a liaison between Dominion and the Trans Ash corporate office. The Operations Manager will be present onsite both routinely and as needed. His responsibilities include project oversight, contract administration and onsite superintendent supervision. The Operations Manager, with assistance from the Superintendent, will coordinate subcontractors, vendors and maintain the project schedule.

The Superintendent will manage the labor, equipment, materials and subcontractors to maintain quality assurance, schedule and safety. He will also provide daily communication with Dominion's onsite personnel. The superintendent will also provide safety/environmental work plans, daily safety pre-jobs/enforcement/inspections/observations and post-jobs for the project.

As part of the Trans Ash Total Quality Program, we have found tremendous benefit in having a Project Engineer in addition to the Operations Manager. The Project Engineer is assigned to the jobsite where they are in charge of schedule and cost tracking, quality control management, materials and subcontractor coordination, employee processing and training and project reporting. Some of his recent work includes procurement of materials, QA/QC, schedule management, implementation of jobsite safety and environmental procedures, daily reports, employee record keeping and site observations and inspections.

#### **b. Staff Qualifications and Experience**

Trans Ash has 55 years of experience in ash management and civil construction activities including erosion control, mass excavation, slope protection and vegetation. Our multi-layered management team has a broad knowledge base to meet the requirements of the Ash Pond Closure Projects. When choosing our team members, we will select those individuals who have specific knowledge of the type of work being performed.

#### **c. Interface points with Dominion**

Trans Ash will provide interface points with Dominion in four distinct areas:

- Executive Level – Bob Gerbus (President) and Joe Kaldmo (Vice President) are accessible by any Duke Energy representatives and are eager to participate in any discussions or activities that Dominion deems beneficial.
- Operations Management –The Operations Manager administers the contract for Trans Ash. He will have frequent communications with the Dominion Project Manager on items such as schedule, billing, safety and other, similar construction topics.
- Site Managers – This management level consists of personnel who are located on the project site on a full time or regularly scheduled visit basis. Site managers include the Superintendent, Project Engineer and the Safety & Environmental Specialist. Site Managers will interface with the Dominion Project Manager, Dominion Safety Supervisor and the QA/QC Engineer.

- Corporate Support – Other interface points include Trans Ash’s corporate support staff. Trans Ash Corporate staff is available to assist Dominion, by supplying support information and documentation. Corporate support personnel include engineering, surveying, ES&H, sales and accounting. Commonly exchanged information includes surveying data files, bonds, insurance documents, safety training and billing details.

## **6. Future resources**

We are currently working at 20 sites for 8 different utilities. Four of the sites will be completing civil construction projects in the next 6 months. Based upon project award time, one or more of those four work crews are available to perform this scope of work. Individuals will be selected from those crews that best meet the requirements of this project. Each is versed in CCR and civil construction methods, project management, environmental compliance, safety compliance and scheduling.

## **7. Types of Equipment**

Trans Ash owns the vast majority of the equipment we utilize. We have attached a current equipment list for your review. We do rent specialized equipment for shorter term use as required. The quantity and sizes of equipment are adjusted by the project type. Typical types of equipment for this project scope include:

- Standard reach track excavator
- Long reach track excavator
- Wide track LGP GPS dozer
- Articulated haul trucks
- Water trucks
- Smooth drum and/or sheep’s foot rollers
- GPS survey equipment
- Hydro seeder
- Dewatering pumps and piping
- Equipment service truck
- Light stations
- Personnel transportation vehicles
- Mobile office facilities
- Mobile generator

## **8. Typical Problems on this project type**

Typical problems on this type of project are often schedule related. Delays can be caused by permitting, engineering lead times, material procurement/lead time, pond dewatering time and unexpected weather events.

Due to the amount of work required within the 3 year time frame, Trans Ash understands that the Possum Point and Brema pond closure projects will have very aggressive schedules. In order to avoid schedule delays, we will perform as much of the project scope as possible during 2015.

We can minimize delays due to constructability issues by working with the selected engineering partner and Dominion personnel throughout the planning and design stages.

## **9. Engineering supplier deliverables**

- Project limitations and specifications
  - Permit conditions
  - Schedule milestones
  - Construction drawings
  - CAD files containing topographic data for existing and design surfaces
  - On-site location and quantities of cover soil available
  - List of deliverables such as shop drawing and reporting requirements

## **10. Active closure construction**

In preparation for final closure, we are dewatering and grading pond surfaces at multiple locations. We can arrange visits based upon mutually agreeable schedules.

## **11. Typical sub-contractors**

Typical sub-contractors for this type of project include:

- Synthetic liner installation
- Licensed surveying
- Cast in place concrete
- Electrical
- Over the road hauling, if required
- Asphalt paving

## **12. Self-perform**

On this type of project, Trans Ash typically self performs the following:

- Pond dewatering
- Pond surface preparation
- Ash excavation and hauling
- Grading within pond and on-site
- Cover soil excavation hauling and placement
- Seeding
- Drainage structure and pipe installation
- Dust control
- Erosion control
- Layout and survey support
- Engineering support

## **13. 2015 bid cycle**

Yes, Trans Ash can support a spring bid cycle with a pre-bid in the March timeframe. A two week pre-bid notice would be greatly appreciated.

## **14. Cost estimates**

If no major, design changes are implemented beyond the 30% package, our estimates are extremely accurate.